

Attorney Docket No. NMTC-0756

**COMBINED DECLARATION AND POWER OF ATTORNEY**

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below by my name;

I believe I am the original, first and sole inventor, if only one name is listed below, or an original, first and joint inventor if multiple names are listed below, of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**METHOD AND APPARATUS FOR CONTROLLING RIPPLING DURING OPTICAL PROXIMITY CORRECTION**

for which a patent application:

☒ is attached hereto.

☐ was filed in the United States on \_\_\_\_\_ as Application No. \_\_\_\_\_;

☐ with amendment(s) filed on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the application identified above, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information known to me to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56, which states in relevant part:

Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section.... The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office....

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d), of any foreign application(s) for patent or inventor's certificate as indicated below and have also identified below any foreign application for patent or inventor's certificate on this invention having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED PRIOR TO THE FILING DATE OF THE APPLICATION			
APPLICATION NUMBER	COUNTRY	DATE OF FILING (Day, Month, Year)	PRIORITY CLAIMED
			YES <input type="checkbox"/> NO <input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, §119(e), of any United States provisional application(s) listed below:

APPLICATION NUMBER	DATE OF FILING

I hereby claim the benefit under Title 35, United States Code, §120, of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information that is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56, which became available between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION NUMBER	DATE OF FILING	STATUS		
		PATENTED	PENDING	ABANDONED

I hereby appoint Daniel E. Vaughan (Reg. No. 42,199), Edward J. Grundler (Reg. No. 47,615), Hoyt Fleming (Reg. No. 41,752)



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PATENT TRADEMARK OFFICE

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and A. Richard Park (Reg. No. 41,241) of PARK, VAUGHAN & FLEMING LLP to prosecute this application and transact all business in the Patent and Trademark Office connected therewith, and to file, prosecute and transact all business in connection with international applications directed to said invention.

Address correspondence to:

Park, Vaughan & Fleming LLP  
508 Second Street, Suite 201  
Davis, CA 95616



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PATENT TRADEMARK OFFICE

Direct telephone calls to:

A. Richard Park  
(530) 759-1661

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, §1001, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

1	Name and Citizenship	Youping Zhang	People's Republic of China
	Residence Address	37151 Magnolia St., Newark, CA 94560	
	Postal Address (if different from Residence)		
	Signature and Date		Date 12/11/01
2	Name and Citizenship		
	Residence Address		
	Postal Address (if different from Residence)		
	Signature and Date		Date
3	Name and Citizenship		
	Residence Address		
	Postal Address (if different from Residence)		
	Signature and Date		Date
4	Name and Citizenship		
	Residence Address		
	Postal Address (if different from Residence)		
	Signature and Date		Date
5	Name and Citizenship		
	Residence Address		
	Postal Address (if different from Residence)		
	Signature and Date		Date

Additional inventor name(s) and signature(s) attached?: YES ☐ NO ☒



UNITED STATES  
PATENT AND  
TRADEMARK OFFICE

FEBRUARY 14, 2002

PTAS

PARK, VAUGHAN & FLEMING LLP  
A. RICHARD PARK  
508 2ND ST., STE. 201  
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Under Secretary of Commerce For Intellectual Property and  
Director of the United States Patent and Trademark Office  
Washington, DC 20231  
www.uspto.gov



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UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/12/2001

REEL/FRAME: 012392/0874  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
ZHANG, YOUPIING

DOC DATE: 12/11/2001

ASSIGNEE:  
NUMERICAL TECHNOLOGIES, INC.  
70 W. PLUMERIA DRIVE  
SAN JOSE, CALIFORNIA 95134-2134

RECEIVED

SERIAL NUMBER: 10016837  
PATENT NUMBER:

FILING DATE:  
ISSUE DATE:

DOROTHY RILEY, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

12-28-2001

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FORM PTO-1595

1-31-92

# 101929719 COVER SHEET PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

To the Assistant Commissioner for Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
Youping Zhang

2. Name and address of receiving party(ies):

Name: Numerical Technologies, Inc.  
Street Address: 70 West Plumeria Drive  
City: State: Zip: San Jose, CA 95134-2134

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other

Additional name(s) & address(es) attached?

☐ Yes ☒ No

Execution Date: December 11, 2001

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: December 11, 2001

A. Patent Application No.(s):

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: A. Richard Park  
Park, Vaughan & Fleming LLP  
508 Second Street, Suite 201  
Davis, CA 95616

Attorney Docket No.: NMTC-0756

6. Total number of applications and patents involved: [1]

7. Total fee (37 CFR 3.41) ..... \$40.00  
☒ Enclosed  
☐ Authorized to be charged to deposit account

8. Deposit account number:

## DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

A. Richard Park

Name of Person Signing

Signature

December 12, 2001

Date

Total number of pages including cover sheet, attachments and document: [3]

#corporate power of attorney

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## CORPORATE ASSIGNMENT

WHEREAS, the undersigned,

Youping Zhang

37151 Magnolia St., Newark, CA 94560

hereinafter termed "Inventor(s)", have invented certain new and useful improvements in

*METHOD AND APPARATUS FOR CONTROLLING RIPPLING DURING OPTICAL PROXIMITY CORRECTION*

and have executed a declaration or oath for an application for a United States patent disclosing and identifying the invention:

X On the 11<sup>th</sup> day of DECEMBER, 2001;

Or

\_\_\_\_ Said application having Application Number\_\_\_\_ and filed on\_\_\_\_; and

WHEREAS, Numerical Technologies, Inc., a corporation of the State of Delaware, having a place of business at 70 West Plumeria Drive, San Jose, CA 95134-2134, (hereinafter termed "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventor(s) (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventor(s) to have been received in full from said Assignee:

1. Said Inventor(s) do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Inventor(s) hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventor(s) shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventor(s) in providing such cooperation shall be paid for by said Assignee.

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3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), their respective heirs, legal representatives and assigns.

4. Said Inventor(s) hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below.

State of CALIFORNIA )

County of SANTA CLARA )

*Youping Zhang*  
Youping Zhang

On 12/11/01 before me, ANN C WILLIAMS, NOTARY PUBLIC  
personally appeared Youping Zhang.

☒ personally known to me or ☐ proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he/~~she~~ executed the same in his/~~her~~ authorized capacity, and that by his/~~her~~ signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

12/11/01  
Date

WITNESS my hand and official seal.

*Ann C. Williams*  
(Notary Public)

